MATONIN, P.

Foundation of the modern industry. Sovshakht. 10 no.10:6 O '61. (MIRA 14:12)
(Communist Party of the Soviet Union--Congresses)
(Karaganda Basin--Coal miners)

MATONIN, P.K., inzh.; VOLKOV, A.S., inzh.; VAL'SHTEYN, G.I., inzh.

Karaganda Basin miners fight for improved mining methods. Shakht. stroi. 7 no.4:1-4 Ap '63. (MIRA 16:3)

1. Karagandinskiy ugol'nyy kombinat (for Matonin, Volkov). 2. Karagandinskiy nauchno-issledovatel'skiy ugol'nyy institut (for Val'shteyn).

MATONIN, P.K.

For the improvement of technical and economic indices of operations in the Karaganda Basin. Ugol' 38 [illegible] 3-4 '63.
(MIRA 17:5)

1. Glavnyy inzh. kombinata Karagandaugol'.

MATONIN, P.K.; LAZAREV, G.A.

Reconstruction of Mine No.38 of the "Karagandaugol'" Combine. Ugol' 39 no.6:15-17 Je'64. (MIRA 17:7)

1. Glavnyy inzh. kombinata Karagandaugol' (for Matonin). 2. Glavnyy inzh. shakhty No.38 kombinata Karagandaugol' (for Lazarev).

MATONIN, P.K., inzh.; VAL'SHTEYN, G.I., kand.tekhn.nauk

New objectives of Karaganda Basin miners. Shakht.stroi. 9 no.4:[illegible]-4 Ap '65. (MIRA 18:5)

1. Glavnyy inzh. kombinata Karagandaugol' (for Matonin). 2. Nachal'nik otdela podgotovitel'nykh rabot Karagandinskogo nauchno-issledovatel'skogo ugol'nogo instituta (for Val'shteyn).

MATONIN, P.K.; MONASTYREV, N.S.; SIMAKOV, V.A.

Making 1,803 meters of mining in 31 workdays at the mine No. 122 of the "Karagandaugol'" Combine. Shakht. stroi. 9 no.7:5-9 Jl '65. (MIRA 18:10)

1. Glavnyy inzh. kombinata Karagandaugol' (for Matonin). 2. Nachal'nik Nauchno-issledovatel'skoy stantsii kombinata Karagandaugol' (for Monastyrev). 3. Starshiy inzh. Nauchno-issledovatel'skoy stantsii kombinata Karagandaugol' (for Simakov).

MATONIN, P.K.

Work practices with powered supports, complexes, and units: In the Karagarda Basin. Ugol' 40 no.5:48-50 My '65. (MIRA 18:6)

1. Glavnyy inzh. kombinata Karagandaugol'.

MATONIN, V.M., slesar'; MINAYEV, I.A., tokar'.

Mechanizing the production of tongues for sport shoes. Leg.prom. 14 no.8: 48-50 Ag '54. (MIRA 7:8)
(Boots and shoes)

MATORA, I. M.

21(9) SOV/89-7-2-8/24

AUTHORS: Alekseyev, A. G., Gashev, M. A., Dondyen, L. L., Malyshev, I. F., Matora, I. M., Mironov, Ye. S., Monoszon, N. A., Nemenov, L. M., Pirogovskiy, V. V., Romanov, N. A., Strel'tsov, N. S., Fedorov, N. D.

TITLE: A 1.20-Meter Cyclotron With a Magnetic Pole Diameter (Tsiklotron s diametrom polyusov magnita 120 sm)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 2, pp 148 - 158 (USSR)

ABSTRACT: The device was developed in the Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury (Scientific Research Institute for Electro-physical Apparatus) in collaboration with the Institut atomnoy energii AN SSSR (Institute for Atomic Energy of the AS USSR). The electro-magnet was designed by N. N. Indyukov, Ye. A. Dongashev, A. V. Klimov under the guidance of D. V. Rozhdestvenskiy and D. Ye. Gritskov (Figs 1 and 2 are cross sections of the electro-magnet). The radial field force was measured in such a way that the error in the center of the field was less than 0.01% of the force of the field. The error at the measurement of the azimuthal inhomogeneity of the field was less than 0.007% of the field force

Card 1/4

in the center of the field. The position of the magnetic plane was determined by the magnetic scale developed by V. V. Pirogovskiy. For the correction of the magnetic field inside rings and discs were used, which are installed between the poles of the magnet and the lids of the vacuum chambers (sectional views are given). The measurements, the construction method and the assembly of the resonance conductor and of the duants are described in detail (there are sectional views). The acceleration chamber and the resonance conductor (there is a detailed sketch) were constructed by A. I. Alyab'yev, I. F. Zhukov, N. N. Rumyantsev under the supervision of B. I. Produvnov. The whole high-frequency installation is shown in a block diagram and there is a short description of part of it. The high-frequency section was developed by G. M. Drabkin, B. V. Vasmatovskiy and R. Yu. Protasovskiy under the supervision of A. S. Yoskin. The vacuum systems were computed by Ya. L. Mikhelis and N. S. Karpenko. The movement of ions in the ion source and in the central part of the cyclotron is of special importance at the acceleration. This movement was thoroughly studied by I. M. Matora. He developed a special deflector system. The focusing system was computed by Yu. G.

Card 2/4

A 1.20-Meter Cyclotron With a Magnetic Pole Diameter SOV/89-7-2-8/24

Basargin. The magnetic quadrupole lenses of N. A. Ostrovskiy and N. I. Konovalova were used in this system. The cyclotron produces 13.7 mev of deuterons while the extreme route of the particle flux can be up to 1 ma. There is a guided beam of 100-200μa at disposal for normal work and the beam is focussed to a plane of 15.20 mm². The control desk, signal equipment and the special electrical installations were designed by V. N. Lyublin, N. D. Nevrov, F. S. Gornikel' working under the guidance of G. S. Goreoychik. Similar cyclotrons, constructed in the USSR, are in operation in Romania, China, Poland and GDR. In the near future a cyclotron of a similar type will be completed in the CSR. The first cyclotron of this type was tested in 1956 by L. N. Baulin, R. N. Letunovskiy, Yu. G. Basargin, A. V. Stepanov, G. A. Maliveyko, N. D. Veselov, V. A. Rusinov and A. I. Antonov from the Scientific Research Institute for Electrophysical Apparatus and I. I. Afanas'yev, A. A. Arzumanov and N. A. Meshcherov from the Institute for Atomic Energy of the AS USSR. The magnetic quadrupole lenses were tested at the cyclotron of the AS USSR (AS UkrSSR) with the participation of V. A. Kovtun. The fabrication of the cyclotron was supervised by A. V. Kozalevskiy.

Card 3/4

A 1.20-Meter Cyclotron With a Magnetic Pole Diameter SOV/89-7-2-8/24

L. N. Fedulov, V. V. Romanov and K. A. Aariyev Ye. G. Komar gave valuable advice. F. K. Arkhangel'skiy aided the testing of the first cyclotron. Problems concerning the planning of the cyclotron were discussed with D. S. Alkhazov. There are 10 figures and 5 Soviet references.

SUBMITTED: March 12, 1959

MATORA, I.M.

[Phasing action of an accelerating electric field in a cyclotron]
O faziruiushchem deistvii uskoriaiushchego elektricheskogo polia v
tsiklotrone. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1961.
10 p. (MIRA 14:10)
(Electric fields) (Cyclotron)

MATORA, I.M.

[New scheme of particle extraction from a synchrocyclotron] Novaia skhema vyvoda chastits iz fazotrona. Moskva, Glav. upr. po ispol'zovaniiu atomnoi energii, 1960. 14 p. (MIRA 17:1)

MATCRA, I.M.

PHASE I BOOK EXPLOITATION SOV/5333

Pchelintseva, G. M., ed.

Uskoriteli; sbornik statey (Accelerators; Collection of Articles) Moscow, Atomizdat, 1960. 121 p. Errata slip inserted. 5,000 copies printed.

Scientific Ed.: B.N. Yablokov; Ed.: G.M. Pchelintseva; Tech. Ed.: N.A. Vlasova.

PURPOSE: This collection of articles is intended for scientists and engineers engaged in the construction and operation of particle accelerators.

COVERAGE: These original articles treat specific problems arising in the operation of present-day accelerators, particularly linear electron accelerators. A new accelerator put into operation at the Ukrainskiy fiziko-tekhnicheskiy institut (Ukrainian Physicotechnical Institute) is described, and problems in the dynamics of particles in linear electron accelerators are discussed. New methods are discussed for the extraction of particles from accelerators. Problems associated with the shaping of permanent magnetic fields and the acceleration of multicharge ions are also treated. The changeover of the series cyclotron to the phasotron acceleration mode with a view to increasing the energy of accelerated particles is described, and some problems connected with the bunching of particles are elaborated. No personalities are mentioned. References accompany each article.

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Antonov, A.V., Yu. V. Korshunov, Ye. A. Meleshko, L.M. Nemenov, and V.S. Panasyuk. Ferrite Frequency Variator for Changing the Cyclotron to Phasotron Acceleration Mode 60

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Nikolayev, V.S., I.S. Dmitriyev, Ya. A. Teplova, and [illegible]. Generation of Multicharge Ions in Cyclotron [illegible]

Dmitriyevskiy, V.P., B.I. Zamolodchikov, and V.V. Kol'ga. Cyclotron With Periodic Magnetic Field for Multi[illegible] [illegible]

[illegible], V.I., A.F. Kuznetsov, and [illegible]. Effect of Multiple Scattering and Radiation During [illegible] [illegible]

24.6520

S/051/60/009/006/003/018
E201/E191

AUTHOR: Matora, I.M.

TITLE: Scattering of Slow Electrons on Helium Atoms with Excitation of the 2^3S- and 2^1S-levels

PERIODICAL: Optika i spektroskopiya, 1960, Vol.9, No.6, pp 707-712

TEXT: The paper was read to the Scientific Council of the Physics Faculty, Leningrad State University imeni A.A. Zhdanov, on November 25, 1954. The author reports a calculation of electron scattering by helium atoms in the 0-40 eV energy range used by Frish and Zapesochnyy (Ref.9), in their experimental study of excitation of mercury with slow electrons. Helium was chosen for calculations because, like mercury, it has two electrons in its outer shell. The present author used Drukarev's integral equations method (Ref.1) to calculate elastic S-scattering of electrons and the excitation functions of the 2^3S- and 2^1S-levels of helium. Only the spherically symmetrical scattering was considered, since it gives cross-sections close to total values. The cross-section for elastic S-scattering is plotted against energy in Fig.1: curve 1 (continuous) represents the calculated values and curve 2 (dashed) gives the experimental results

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Scattering of Slow Electrons on Helium Atoms with Excitation of the 2^3S- and 2^1S-levels

obtained by Ramsauer and Kollath (Ref.3). Fig.2 gives the excitation functions of helium: curves denoted by I refer to the 2^3S-level, those denoted by II represent the 2^1S-level. Numbers 1, 2 and 3 by the curves signify, respectively, the results obtained by the integral equations calculation, the experimental results of Maier-Liebnitz (Ref.2), and the calculated results of Massey and Moiseiwitsch (Ref.13). The calculated scattering cross-section and the excitation functions were in good agreement with reported experimental work. The calculated limit of the elastic scattering cross-section for very slow electrons agreed better with experiment (Refs 4-7) than did the calculated value of Moiseiwitsch (Ref.8).

There are 2 figures and 13 references: 4 Soviet, 6 English and 3 German.

SUBMITTED: March 9, 1960

Card 2/2

VC

39814
S/057/62/032/008/002/015
B104/B102

246730

AUTHOR: Matora, I. M.

TITLE: Phasing effect of an accelerating electric field in a cyclotron

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 8, 1962, 914 - 918

TEXT: A study of the equation of motion for ions in crossed electric and magnetic fields within the range where the fields are homogeneous,

$$\left.\begin{aligned}\ddot{x} &= k\omega\dot{y} + \omega^2\lambda\cos(\omega t + \varphi_n),\\ \ddot{y} &= -k\omega\dot{x},\end{aligned}\right\} \qquad k\omega = \omega_L, \quad \omega = \frac{Z_0}{A_0}ec\frac{H_0}{m_0c^2 + W_0} = \mathrm{const}, \tag{2}$$

leads to

$$\frac{d\varphi_\nu}{d\nu} = \omega(t_\nu - t_{\nu-1}) - \pi = \pi\left(\frac{\omega}{\omega_L} - 1\right) + \frac{\omega}{\omega_L}\frac{Z_0}{2A}\int\frac{E_n(s)\,ds}{W(s)}. \tag{14}$$

Card 1/2

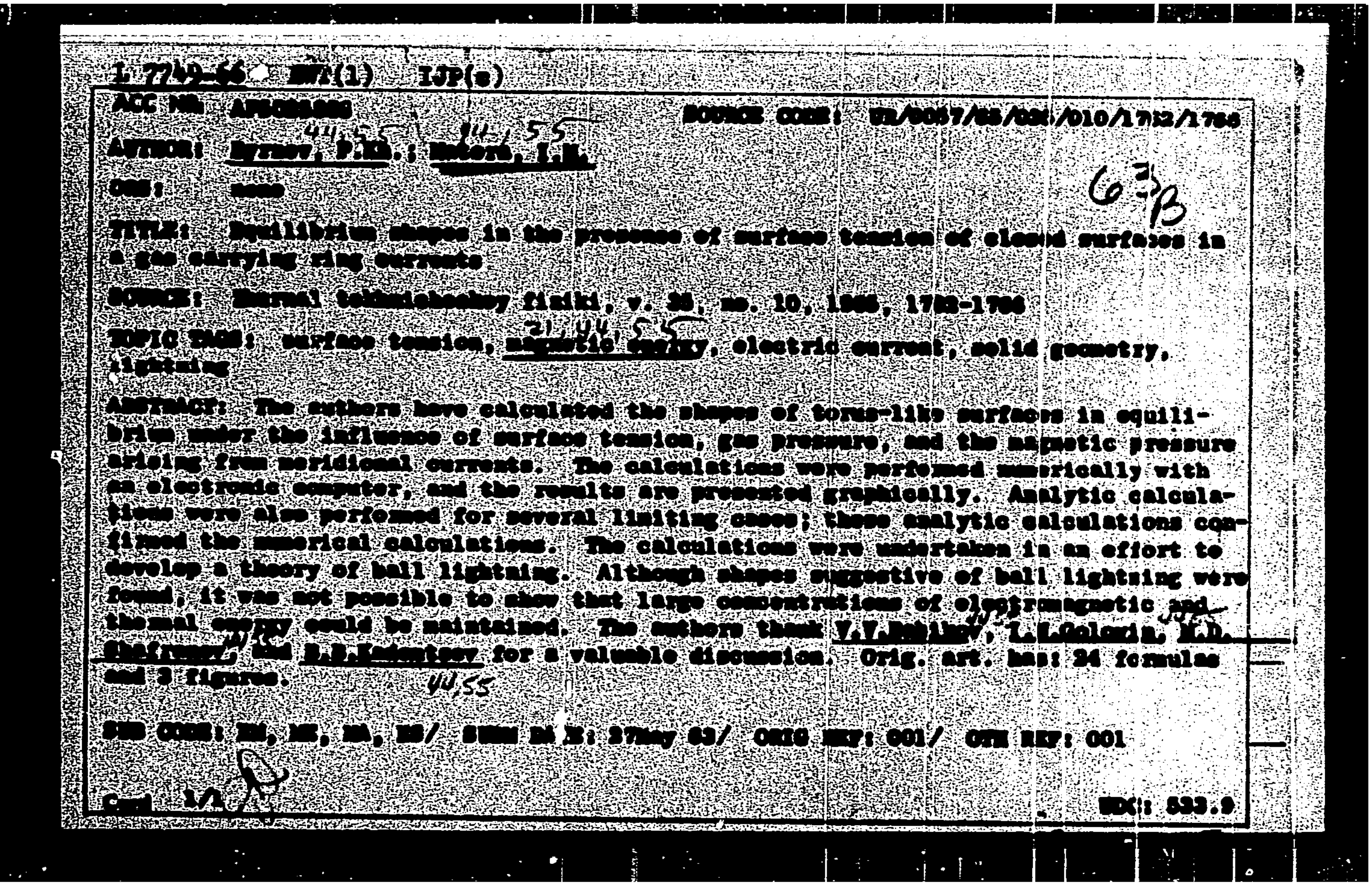
S/057/62/032/008/002/015
B104/B102

Phasing effect of an...

for the frequency dependence of the accelerated ion phases, where $\vec{H} \| 0z$, $\vec{E} \| 0x$, $E_x = E_m \cos\omega t$, E_m = const, H = const, $\lambda = \frac{Z}{A} \frac{e}{m} \frac{E_m}{\omega^2}$; φ_0 - initial ion phase. It follows from (14) that an ion phase shift can be caused only by those components of the electric field (E_m) which do not change the ion energies. The first term in (14) describes the phase shift due to the differences between Larmor frequency and the frequency of the accelerating field. Generally, only this term is taken into consideration. It is shown that phase shifts can be brought about by reversing the acceleration direction of the ions. Thereby it is possible to improve the focusing properties. There are 2 figures.

SUBMITTED: August 21, 1961

Card 2/2



L 7749-66 EWT(1) IJP(c)

ACC NR: [illegible] SOURCE CODE: UR/0057/65/035/010/1782/1786

44,55 44,55

AUTHOR: [illegible], P.Kh.; [illegible], I.M.

63B

ORG: none

TITLE: Equilibrium shapes in the presence of surface tension of closed surfaces in a gas carrying ring currents

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 10, 1965, 1782-1786

21,44,55

TOPIC TAGS: surface tension, magnetic energy, electric current, solid geometry, lightning

ABSTRACT: The authors have calculated the shapes of torus-like surfaces in equilibrium under the influence of surface tension, gas pressure, and the magnetic pressure arising from meridional currents. The calculations were performed numerically with an electronic computer, and the results are presented graphically. Analytic calculations were also performed for several limiting cases; these analytic calculations confirmed the numerical calculations. The calculations were undertaken in an effort to develop a theory of ball lightning. Although shapes suggestive of ball lightning were found, it was not possible to show that large concentrations of electromagnetic and thermal energy could be maintained. The authors thank V.V.Babikov, L.L.Golovin, V.D. Shafranov, and B.B.Kadomtsev for a valuable discussion. Orig. art. has: 24 formulas and 3 figures. 44,55

SUB CODE: 20, ME, MA, ES/ SUBM DATE: 27May 65/ ORIG REF: 001/ OTH REF: 001

Card 1/1 UDC: 533.9

L 22417-66 EWT(m)/EPF(n)-2/EWG(m) WW

ACC NR: AP6007943 SOURCE CODE: UR/0089/66/020/002/0106/0111

AUTHORS: Anan'yev, V. D.; Antsupov, P. S.; Kapitsa, S. P.; Khar'yuzov, R. V.; Matora, I. M.; Melekhin, V. N.; Merkulov, L. A. 50 43 B

ORG: none

TITLE: 30 Mev microtron injector for a fast-neutron pulsed reactor 19

SOURCE: Atomnaya energiya, v. 20, no. 2, 1966, 106-111

TOPIC TAGS: linear accelerator, particle accelerator component, fast neutron, fast reactor/[illegible]

ABSTRACT: The authors describe briefly the main features and parameters of the 30-Mev microtron injector (linear-accelerator injector) now in operation at the Laboratory of Neutron Physics of OIYaN. The use of a microtron helps greatly reduce the duration of the reactor activity burst and by the same token improve the resolution attainable with fast-neutron experiments, since the reactor does not become supercritical and serves only as a neutron multiplier. 2

Card 1/2 UDC: 621.384.611.3

L 22417-66
ACC NR: AP6007943

The microtron is identical in design with that of the IFP (L. M. Zykin et al., Transactions of International Conference on Accelerators, Dubna, 1963, p. 1049). The individual units of the microtron as modified to operate with the IBR reactor are described briefly, together with the results of approximately 350 hours of operation. The electron current, separated and focused on a remote target, reaches 60 ma in pulse. An original optical system for extraction, focusing, and aiming the beam on the target, together with the good monochromatic properties of the beam (energy scatter 0.3%) and small angle divergence ensure 100% efficiency of utilization of electrons remaining in the last (thirtieth) orbit. The authors thank D. I. Blokhintsev, P. L. Kapitsa, I. M. Frank, and F. L. Shapiro for continuous interest and help, and S. K. Nikolayev, B. I. Voronov, and B. N. Bunin, whose cooperation contributed to the construction of the accelerator. Orig. art. has: 6 figures

SUB CODE: 18 SUBM DATE: 09Aug65/ ORIG REF: 003/

Card 2/2

MATORENOK, L.N.

Determination of suspended matters in waste waters. Khim. volok. no.5:51-52 '63. (MIRA 16:10)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna.

MATORIN, A.P.

Inequalities between the largest absolute values of a function and its derivatives on a half line. Ukr.mat.zhur. 7 no.3:262-266 '55.
(Functions)

MATORIN, A.P., assistent

Methods for the solution of trigonometric equations. Trudy MIIGAIK no.32:107-112 '58. (MIRA 12:7)

1. Kafedra vyshshey matematiki Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.
(Trigonometry)

MATORIN, A.P. (Moskva)

Proving a triangle theorem without the help of the fifth Euclid postulate. Mat. v shkole no.4:88-89 Jl-Ag '61. (MIRA 14:8)
(Geometry--Problems, exercises, etc.)

ZAYDEL', L.; YERSHOV, B.A., assistent; DEDKOV, S., starshiy inzh.; BOGDANOV, (g.Krasnoyarsk); MAKKOVEYEV (g.Krasnoyarsk); PUZANOV (g.Krasnoyarsk); MATORIN, I.; PROKOPOV, I.T. (g.Vinnitsa)

Continuing the discussion on centralized preparation of technical specifications. Mashinostroitel' no.8:38-39 Ag '62. (MIRA 15:8)

1. Nachal'nik otdela modernizatsii Kuybyshevskogo instituta NIPTIMASh (for Zaydel'). 2. Severozapadnyy zaochnyy politekhnicheskiy institut (for Yershov). 3. Upravleniya glavnogo mekhanika i energetika Vserossiyskogo soveta narodnogo khozyaystva (for Dedkov). 4. Nachal'nik konstruktorskogo byuro otdela glavnogo mekhanika zavoda "Gomsel'mash" (for Matorin).

(Machinery—Specifications)

MATORIN, I.P.; KUZ'MIN, D.Ye.

Modernization of drop hammers. Mashinostroitel' no.6:15 Je '63. (MIRA 16:7)

(Forging machinery)

MATORIN, I.P.

Organization of equipment repair at the Gomel' Agricultural Machinery Plant. Mashinostroitel' no.10:8-9 O '65. (MIRA 18:10)

MATORIN, M.V.

[Moscow Kremlin in prints] Moskovskii Kreml' v graviurakh.
Moskva, Kombinat graficheskikh rabot khudozh.fonda, 1959.
4 p., 10 col.plates (in portfolio). (MIRA 13:2)
(Moscow--Kremlin--Views)

MATORIN, M. V., prof.

Soviet prints. Rabotnitsa 40 no.3:24 Mr '62. (MIRA 16:2)
(Engravings)

MATORIN, N.N.

GEL'MAN, A.D.; MATORIN, N.N.; MOSKVIN, A.I.

Conditions for the formation and stability of Pu (III) oxalate complex compounds in aqueous solutions. Dokl. AN SSSR 117 no.1:88-91 N-D '57. (MIRA 11:3)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom I.I. Chernyayevym.
(Complex compounds) (Plutonium organic compounds)

10(1)

AUTHOR: Matorin,P.V. SOV/155-58-3-34/37

TITLE: On the A.I. Bachinskiy Law of Compressibility of Fluids
(O zakone szhimayemosti zhidkostey A.I.Bachinskogo)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 3, pp 196-202 (USSR)

ABSTRACT: The paper is devoted to the examination of the law of compressibility of fluids found by A.I.Bachinskiy [Ref 1] in 1930-1931. According to his formula we have

$$(1) \qquad p + K = \frac{L}{v^7} ,$$

where p is the pressure, v is the specific volume, K and L are material constants linearly depending on the temperature: $K = K_0 - kt$, $L = L_0 + lt$. The formula was compared with the experimental results of Bridgman. For pressures between 1500 and 12000 kg/cm^2 it shows a high agreement with the experiment (error up to 0.1%). For pressures below 1000 kg/cm^2 (1) yields

Card 1/2

On th A.I. Bachinskiy Law of Compressibility of [illegible] SOV/155-58-3-34/37
Fluids

too small values. The examination was carried out for 7 fluids. The author thanks Professor K.A.Putilov for valuable hints. There are 7 figures, 1 table, and 5 references, 2 of which are Soviet, and 3 American.

ASSOCIATION: Moskovskiy ordena Lenina aviatsionnyy institut [illegible]
Ordzhonikidze (Mosco Order of Lenin Aviation [illegible]
imeni S. Ordzhonikidze)

SUBMITTED: March 10, 1958

Card 2/2

MATORIN, P.V.

Compressibility of liquids and solids by superhigh pressures.
Nauch.dokl.vys.shkoly; fiz.-mat.nauki no.3:141-144 '59.
(MIRA 13:6)

1. Moskovskiy ordena Lenina aviatsionnyy institut imeni
S.Ordzhonikidze.
(Compressibility) (High pressure research)

MATORIN, V.I.; POGOSOV, V.Z.

Anomalous grain growth in cast iron-aluminum alloys. Metalloved. i term. obr. met. no.12:41 D'63. (MIRA 17:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Matorin, Pogosov).

L 02991-67 EWT(m)/EWP(t)/ETI IJP(c) MJW/JD/JG

ACC NR: AP6033155 SOURCE CODE: UR/0105/66/000/010/0082/0083 77
B

AUTHOR: Gorina, N. B.; Gruznov, Yu. A.; Kolobanov, V. V.; Matorin, V. I.; Prokoshin, A. F.; Rad'kov, A. I.; Sokolov, V. I.; Tret'yakov, B. N.; Fedotov, L. N.; Khromov, S. M.; Kuleshov, V. F.

ORG: Central Scientific Research Institute of Ferrous Metallurgy im. I. P. Bardin (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

TITLE: The 65BT superconducting alloy 4
16

SOURCE: Elektrichestvo, no. 10, 1966, 82-83

TOPIC TAGS: superconducting alloy, superconductivity

ABSTRACT: A new, relatively low cost Nb-Ti based alloy, designated 65BT, which meets all the major requirements for superconductors has been developed. Because of its properties it can be used in 1) magnetizing devices, such as superconducting solenoids, for field strengths varying from 20 to 80 koe, and 2) wires 0.1—0.3 mm in diameter and up to 12,000 m long and tapes 5 μ thick. The alloy, which contains 65% niobium, 25% titanium, and several other components, is produced in

Card 1/2 UDC: 537.312.62

L 02991-67

ACC NR: AP6033155

an arc furnace and, after thermal processing, is cold drawn. For use in superconducting solenoids, the alloy requires a 0.02—0.05-mm copper coating. Orig. art. has: 1 table.

SUB CODE: 20/ SUBM DATE: none/ ATD PRESS: 5099

awm

Card 2/2

VIDRO, G.I.; LUFT, B.L.; MATORIN, Yu.V.

Using gas discharge apparatus as light sources for the spectrum analysis of inert gases. Fiz.sbor. no.4:212-214 '58.
(MIRA 12:5)
(Electric discharges through gases) (Gases, Rare--Spectra)

МАТОРИНА, А. I.

AUTHORS: Gel'man, A. D., Matorina, N. N., Moskvin, A. I. 89-1-6/29

TITLE: The Determination of the Composition and the Instability Constant of Oxalate Complexes of Pu^{+3} Compounds by the Method of Ion Exchange (Opredeleniye sostava i konstant nestoykosti oksalatnykh kompleksnykh soyedinneniy Pu^{+3} metodom ionnogo obmena).

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 1, pp. 52 - 56 (USSR).

ABSTRACT: By the method of ion exchange the formation of ion complexes of Pu^{+3} in oxalate solutions was determined, and the pH value of the solutions was found to fluctuate between 1,4 and 2,8. Measuring results:

1.) The instability constant of the complex ion $[Pu(C_2O_4)_2]^-$ is practically constant with in the range of the pH values from 1,47 to 2,65 (11 values).

2.) In a solution with pH $>$ 1,7 s mixture of complex ions $[Pu(C_4O_2)_2]^-$ and $[Pu(HC_2O_4)_4]^-$ is developed, and the average instability constants for these two types of ions were measured to be $K'_H = 7,1.10^{-10}$ and $K''_H = 1,1.10^{-11}$.

Card 1/2

3.) The constants K'_H and K''_H correspond to a total decay of the

The Determination of the Composition and the Instability Constant of Oxalate Complexes of Pu^{+3} Compounds by the Method of Ion Exchange. 89-1-6/29

ions in accordance with the form:

$$[Pu(C_2O_4)_2]^- \rightleftarrows Pu^{+3} + 2C_2O_4^{=}$$

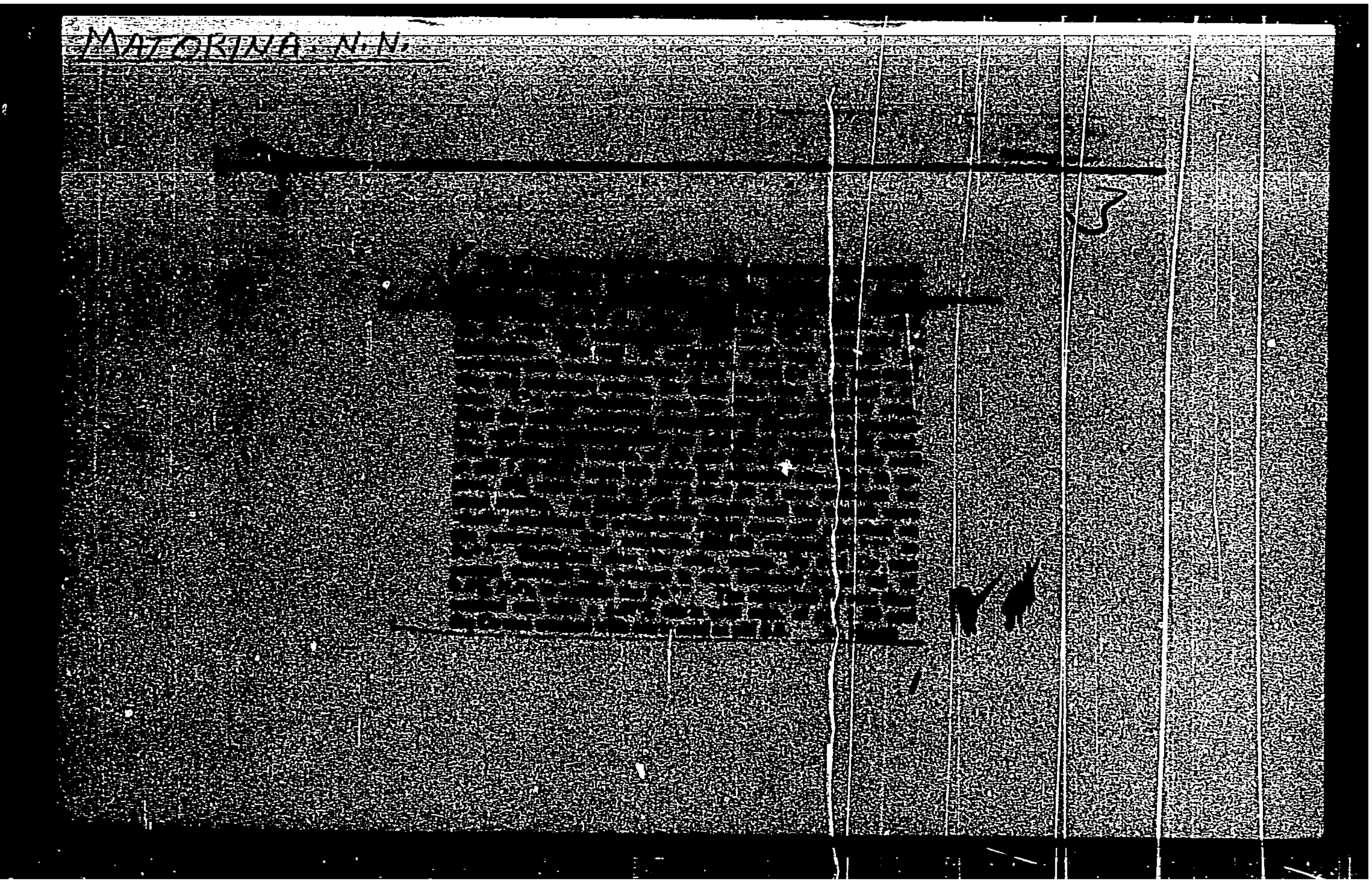
$$[Pu(HC_2O_4)_4]^- \rightleftarrows Pu^{+3} + 4HC_2O_4^{-}$$

4.) Determination of K_H for the complex ion $[Pu(C_2O_4)_2]^-$ by the method of ion exchange supplies values which agree satisfactorily with those obtained by the solubility method.
There are 4 figures, 2 tables, and 15 references, 12 of which are Slavic.

SUBMITTED: August 15, 1957.

AVAILABLE: Library of Congress.

Card 2/2



MATORINA, N.N.

3

MATORINA, N.N.

[illegible]

[illegible]

[illegible] : [illegible], K. V., and [illegible], N. N.

[illegible] : Study of [illegible] chromatography with the application of marked atoms. Part 2. Theoretical bases and the Co^{2+} and Fe^{2+} ion exchange isotherm

[illegible] : [illegible]

[illegible] : Employing cobalt and iron ions as an example the authors analyzed the bases of an equilibrium stage ion-exchange chromatography. The ion exchange adsorption isotherms for Co^{2+} - H^+, Fe^{2+} - H^+ and Co^{2+} - NH_4^+ in CM-1 cationite were measured with the aid of radioactive iron and cobalt isotopes and the exchange constants for the systems mentioned above were established. The ion exchange adsorption isotherms obtained in this experiment allow the adsorbed ion amounts to be determined at corresponding equilibrium concentrations of ions in the solution. Eight references: 1 USSR, 7 USA (1948-1955). Tables; graphs.

[illegible] : Acad. of Sci., USSR, Inst. of Phys. Chemistry, Moscow

[illegible] : April 29, 1955

YELOVICH, S.Yu.; MATORINA, N.N.

Study of complexing chromatography with the aid of tracers. Part 2. Physicochemical characteristics of citrate and oxalate iron (II) and cobalt (II) complexes obtained with the aid of ion exchange. Zhur. fiz.khim.30 no.2:383-390 F '56. (MLRA 9:7)

1.Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva.
(Iron organic compounds) (Cobalt organic compounds) (Ion exchange)

МАТОРИНА, Н. Н.

AUTHORS Gel'man A.D., Matorina N.N., Moskvin A.I. 89-10-4/36

TITLE Determination of the Composition and Instability Constants of Pu^{+3} Oxalate Complexes.
(Opredeleniye sostava i konstant nestoykosti oksalatnykh kompleksnykh ionov Pu^{+3}) - Russian).

PERIODICAL Atomnaya Energiya , 1957, Vol 3, Nr 1o, pp 3o8 - 313 (U.S.S.R.)

ABSTRACT The solubility of $Pu_2(C_2O_4)_3 \cdot 9H_2O$ in aqueous $K_2C_2O_4$-solution of the most various concentrations /0,o1 - 2,4 Mol/1/ was measured at constant ionization of the solution and at a temperature of 2o°C. Forming of Pu^{+3} complexes was proved and the following ion complexes were formed: $[Pu(C_2O_4)_2]^-$, $[Pu(C_2O_4)_3]^{-3}$ and $[Pu(C_2O_4)_4]^{-5}$ with the instability constants:
$4{,}9 \cdot 10^{-10}$; $4{,}10 \cdot 10^{-10}$ and $11{,}9 \cdot 10^{-11}$ respectively.
The solubility of $Pu_2(C_2O_4)_3 \cdot 9H_2O$ in an aqueous $(NH_4)_2C_2O_4$-solution at an ammonium concentration of 0,o7 -0,7 mol/1 at a temperature of 7o° C was also measured.The following ion complexes with the instability constants were found:
$[Pu(C_2O_4)_2]^-$ .... $11{,}6 \cdot 10^{-9}$
$[Pu(C_2O_4)_3]^{-3}$ .... $5{,}6 \cdot 10^{-9}$
$[Pu(C_2O_4)_4]^{-5}$ .... $2{,}5 \cdot 10^{-9}$
There are 4 figures, 3 tables and 7 Slavic references.

SUBMITTED January, 19, 1957
AVAILABLE Library of Congress.
Card 1/1

AUTHORS: Gel'man, A. D., Matorina, N. N. and Moskvin, A. I.

20-1-23/42

TITLE: An Investigation of the Formation Conditions and of the Stability of Complex Oxalate Compounds of Pu (III) in Aqueous Solutions(Issledovaniye usloviy obrazovaniya i prochnosti oksalatnykh kompleksnykh soyedineniy Pu (III) v vodnykh rastvorakh).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 1, pp. 88-91 (USSR)

ABSTRACT: From other publications it is well known, that Pu (III) shows much less preference for the formation of complexes. The authors studied the stability of solutions of oxalate, carbonate, citrate and ethylene-diamine-tetra-acetate complex compounds of Pu (III) against oxydation by the oxygen of the air by spectral photometric methods. It appears, that Khindmen was correct with his assumption, that complex formation cannot cause a noticeable modification of the absorption spectrum of Pu (III). After the authors having established the conditions of the above-mentioned stability, they approached the problem of the determination of the composition and of the instability

Card 1/4

An Investigation of the Formation Conditions and of the Stability of Complex Oxalate Compounds of Pu (III) in Aqueous Solutions

20-1-23/42

constant of the complex ions of PU (III) with various complex constituents. Two methods were employed: a) the method of solubility (at pH ~ 8) and b) the method of ion-exchange (at pH ~ 1'4 - 3'0). a) At first the solubility of $Pu_2(C_2O_4)_3 \cdot 9H_2O$ in aqueous solutions of $K_2C_2O_4$ at 20°C and at a constant ion density of the solution was determined. Pu (III) was protected against oxydation by a nitrogen jet. The plutonium contents of the solution were determined by radiometric measurements. The results are given in table 1, from which the composition and the general instability constants (reference 6) of the oxalate complex ions of Pu (III) were determined or computed, respectively. In the range of concentration of $K_2C_2O_4$ under investigation complex ions are formed (more exactly a relation between Pu (III) and the C_2O_4''-ion): $/Pu(C_2O_4)_2/^-$, $/Pu(C_2O_4)_3/^{3-}$ and $/Pu(C_2O_4)_4/^{5-}$, the total concentration instability constants

Card 2/4

An Investigation of the Formation Conditions and of the Stability of Complex Oxalate Compounds of Pu (III) in Aqueous Solutions 20-1-23/42

of which ("obshchiye kontsentratsionnyye konstanty nestoykosti"), corresponding to 4,9. 10^{-10}; 4,1. 10^{-10} and 1,2. 10^{-10}, are equal. The dependence of the concentration of the ions in question on the concentration of the complex constituent is illustrated in figure 1.
In an analoguous way the solubility of $Pu_2(C_2O_4)_3 \cdot 9H_2O$ in aqueous solutions of $(NH_4)_2C_2O_4$ in the range of concentration of the ammonium oxalate from 0'07 to 0'7 Mol/l at 70°C was determined (table 1). In this process complex ions of the same composition are formed, the total instability constants of which for $Pu_2(C_2O_4)_2/^{-}$ 11,6.10^{-9}, for $/Pu(C_2O_4)_3/^{3-}$ 5,6. 10^{-9}, and for $Pu+(C_2O_4)_4/^{5-}$ 2,5. 10^{-9} are equal. The heat of formation of the complex ions in the case of the reaction

$$Pu^{3+} + nC_2O_4'' \rightleftarrows /Pu(C_2O_4)_n/^{3-2n} \quad (1)$$

Card 3/4 was also computed. It was found, that ΔQ equals 1300 Kcal;

An Investigation of the Formation Conditions and of the Stability of Complex Oxalate Compounds of Pu (III) in Aqueous Solutions

20-1-23/42

for the /$Pu(C_2O_4)_2^-$ ion. The data on the complex formation of Pu (III), obtained with $C_2O_4^{''}$-ions by means of the method of solubility, were confirmed by the method of ion exchange. Finally, the distribution of Pu (III) between the 1 molar solution of NH_4Cl and of "cationite" KU-2 (reference 15) was determined with respect to the pH-value of the solution (table 2). There are 2 figures, 2 tables, and 15 references, 8 of which are Slavic.

ASSOCIATION: Institute for Physical Chemistry AN USSR (Institut fizicheskoy khimii Akademii nauk SSSR)

PRESENTED: June 24, 1957, by I. I. Chernyayev, Academician

SUBMITTED; June 13, 1957

AVAILABLE: Library of Congress

Card 4/4

MATORINA N. N.

CHEMISTRY AND PHYSICAL CHEMISTRY OF REACTOR MATERIALS AND PROCESSES

"Determination of the Composition and Dissociation Constant for Oxalate Complexes for Pu 3 by the Ion-Exchange Method." by . A. D. Gel'man, N. N. Matorina and A. I. Moskvin. Atomnaya Energiya, No 1, January 1958, pp 52-56.

The Method of ion exchange is used to study the oxalate complexes of Pu3 in the PH interval 1. 4. to 3.0. It is established that in this PH region, there are formed the complex ions $[Pu(C_2O_4)_2]$ and $[Pu(HC_2O_4.)_4]$, whose instability constants are K1 - 7. 1 x 10^{-10} and K" 1 - 1.1 x 10^{-11}. The value of the instability constant of the complex ion $[Pu(C_2O_4)_2]$ is in satisfactory agreement with the value of the instability constant of the corresponding complexion, obtained by the solubility method.

Bibliography of 15 titles.

5(4) SOV/76-32-11-14/32

AUTHORS: Matorina, N. N., Popov, A. N.

TITLE: The Effect of Temperature on the State of the Ion Exchange Equilibrium (Vliyaniye temperatury na sostoyaniye ionoobmennogo ravnovesiya) I. The Basic Factors Determining the Changes of Ion Exchange Adsorption With Temperature (I. Osnovnyye faktory, opredelyayushchiye izmeneniya ionoobmennoy adsorbtsii s temperaturoy)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 11, pp 2557-2560 (USSR)

ABSTRACT: After this work had been received by the board of editors, some papers on the thermodynamics of the ion exchange were published. The papers by E. H. Cruikshank, P. Meares and O. D. Bonner, L. L. Smith are said to be of special interest. Griessbach (Grissbakh) (Refs 7,8) on the basis of the equation (1) by Gregor-Glueckauf (Glyukauf) arrives at the conclusion that the coefficient of selectivity always changes with an increase in temperature. It is assumed that of two ions in the adsorbent the one that is more hydrated in the solution will be hydrated to a greater extent. This agrees with the experimental results

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SOV/76-32-11-14/32

The Effect of Temperature on the State of the Ion Exchange Equilibrium. I. The Basic Factors Determining the Changes of Ion Exchange Adsorption With Temperature

by Glueckauf and Kitt (Ref 12). Thus, the heat effect of the ion exchange adsorption on a certain cationite depends to a great extent on the hydration heat of the adsorbed ions. It was found that changes in temperature of the volumes of the adsorbed ions can have an effect on the temperature changes of the ion exchange adsorption, as well as changes of the swelling pressure and of the ratio between the activity coefficient of the ions in the solution and in the sorbent. A change of the composition of the ion exchange resin can also have an effect on the extent of the temperature changes of the ion exchange adsorption. The experimental data concerning the above-mentioned statements will be given in the next paper to be published. There are 12 references, 1 of which is Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (Academy of Sciences, USSR, Institute of Physical Chemistry, Moscow)

Card 2/3

5(4)

AUTHORS: Matorina, N. N., Popov, A. N. SOV/76-32-12-15/32

TITLE: The Temperature Influence on the State of the Ion Exchange (Vliyaniye temperatury na sostoyaniye ionoobmennogo ravnovesiya) II. Temperature-Conditioned Changes in the Ion-Adsorption in Sulfo-Synthetic Resins (II. Temperaturnyye izmeneniya ionoobmennoy adsorbtsii na sul'fosmolakh)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 12, pp 2772 - 2779 (USSR)

ABSTRACT: This is an investigation of the sulfo-polystyrene cationite **SM** -12 with a varying content of divinyl benzene (4, 8, 16 and 20%) and the cationite KU -2. The selectivity coefficient in the exchange of the ion-pairs H^+-Ca^{++}, H^+-Sr^{++}, Sr^{++} - Ca^{++}, H^+-Ce^{+++}, K^+-Ce^{+++} and H^+-Cs^+ was determined. The ion concentrations were determined radiometrically by means of tracer atoms (Cs^{137}, Ca^{45}, Sr^{89}, Ce^{144}). The state of the ion-exchange was established for two temperatures. The heats of reaction in the ion-exchange are proportional to the heats of hydration of ions in solution. Their sizes and signs depend on the relation of the heat

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The Temperature Influence on the State of the Ion Exchange. II. Temperature-Conditioned Changes in the Ion-Adsorption in Sulfo-Synthetic Resins SOV/76-32-12-15/32

of hydration of the ion in solution to that in the cationite. In the exchange of hydrogen ions apparent divergencies are noticed, but can be explained by the fact that the H^+-ion is always represented in water as a hydroxonium ion (H_3O). On the basis of the calculations a quantitative prediction of the temperature-conditioned changes in the ion-exchange in sulfo-synthetic resins is possible. There are 8 figures, 3 tables, and 7 references, 1 of which is Soviet.

ASSOCIATION: Akademiya nauk SSSR (Academy of Sciences, USSR) Institut fizicheskoy khimii, Moskva (Physico-Chemical Institute, Moscow)

SUBMITTED: May 10, 1957

Card 2/2

MATORINA, N.N.; SAFONOVA, N.D.; CHMUTOV, K.V.

Frontal analysis in ion-exchange complex-forming chromatography.
Radiokhimiia 1 no.3:346-352 '59. (MIRA 12:10)
(Chromatographic analysis)

MATORINA, N.N.; SAFONOVA, N.D.; CHMUTOV, K.V.

Frontal analysis in ion-exchange complex-forming chromatography. Part 2: Application of frontal analysis in the separation of the micro component from the macro constituent. Radiokhimiia 1 no.3:353-359 '59. (MIRA 12:10)

(Chromatographic analysis) (Acetic acid)

MATORINA, N.N.; SAFONOVA, N.D.

Ethylenediaminotetraacetate complexes of alkaline earth metals, as studied by means of ion exchange. Zhur.neorg.khim. 5 no.2: 313-320 F '60. (MIRA 13:6)

(Alkaline earth compounds)
(Acetic acid)

MATORINA, N.N.; CHMUTOV, K.V.; SAFONOVA, N.D.; SHEPETYUK, L.V.

Kinetics of ion exchange processes in the presence of complex-forming reagents. Dokl. AN SSSR 152 no.4:915-918 O '63.
(MIRA 16:11)

1. Institut fizicheskoy khimii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Chmutov).

ACCESSION NR: AP4034580 S/0076/64/038/004/0932/0938

AUTHOR: Matorina, N. N. (Moscow)

TITLE: Equilibrium partition coefficient in ion exchange complexation chromatography.

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 4, 1964, 932-938

TOPIC TAGS: ion exchange, partition coefficient, chromatography, yttrium, praseodymium, cesium, equilibrium constant

ABSTRACT: The purpose of this article is to consider the main parameters which characterize the equilibrium partition coefficient. This is generally expressed as the ratio of distribution coefficients of the separated components or by the ratio of the rates of displacement of the centers of zones of these components. These quantities are of great importance, since they are frequently used as characteristics of the separating ability of complex-forming elements, on the basis of which one makes a choice of the complexation agent which is most suitable for separation of a given mixture. The ratio of distribution coefficients in the general case is a function of the concentration complex former and temperature,

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ACCESSION NR: AP4034580

but in the case of elements which are weak acids it also depends on the pH. The expressions were obtained which enable one to determine the equilibrium partition coefficients under different conditions and also to find without any preliminary experimentation the conditions under which one obtains a maximum value of the partition coefficient in a given system. The obtained equations are in good agreement with experimental data on the distribution of Yt, Eu and Ce between the cationite SDV-3 and EDTA at different pH. Orig. art. has: 3 figures.

ASSOCIATION: Institut fizicheskoy khimii akademii nauk SSSR (Institute of Physical Chemistry Academy of Sciences SSSR)

SUBMITTED: 03Aug63 ENCL: 00

SUB CODE: GC NO REF SOV: 004 OTHER: 000

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 8, 1964, 1947-1949

TOPIC TAGS: cationite, ion exchange, column chromatography, complexation, elution, cerium, europium

ABSTRACT: The article considers the results of the study of separation of rare earths by EDTA and citrate solutions. All studies were carried out at very small adsorption of rare earths on cation exchange resins (less than 1%). Columns were thermostatted to ±1C. Each column contained 3 g of cation exchanger KU-2 (8-10% divinylbenzene). The investigated rare earth elements Ce^{144}-Pr^{144} and $Eu^{152, 154}$

the column. The sorbed rare

Card 1/2

L 21331-65

ACCESSION NR: AP4044457

and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AN SSSR)

SUBMITTED: 20Jul63 ENCL: 00 SUB CODE: C

NR REF SOV: 004 OTHER: 003

Card 2/2

MATORINA, S. N.

Sinitskiy, A. A., Chebotarevich, M. F. and Matorina, S. N. "Immunological properties of globulin fractions of antiscarlet fever sera," in symposium: Skarlatina i streptokokkovyye infektsii, Leningrad, 1948, p. 149-62 - Bibliog: 8 items

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

MATORINA, T.V.; OBORINA, S.F.; SAVARENSKIY, Ye.F.

Determination of the velocity of propagation of longitudinal waves in the earth's shell based on observations of deep-seated earthquakes. Trudy Geofiz.inst. no.30:22-29 '55. (MIRA 9:6)
(Waves) (Seismology)

S/194/62/000/011/012/062
D201/D308

9,2520

AUTHOR: Matorina, V. S.

TITLE: Design of a magnetic amplifier working with a non-linear load

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 11, 1962, 10, abstract 11-2-19p (In collection: Avtomat. regulirovaniye i upr. M., AN SSSR, 1962, 329-334)

TEXT: The design of a magnetic amplifier, with an a.c. electromagnet at its output, is given. To improve the operation of both the electromagnet and of the magnetic amplifier, 2 solutions of this problem are suggested: 1) designing a highly efficient magnetic amplifier; 2) connecting, in series with the load, a capacitance equal in magnitude to the sum of inductive reactances of the saturated magnetic amplifier and of the relased electromagnet. The operation of the electromagnet and of the magnetic amplifier in the second case is analyzed. The characteristic of the magnetic

Card 1/2

Design of a magnetic ...

S/194/62/000/011/012/062
D201/D308

amplifier operated from a logical element is given. 5 figures.
/ Abstracter's note: Complete translation. /

Card 2/2

33769
S/103/62/023/001/007/014
D201/D304

9.5400 (1161,1147)

AUTHORS: Matorina, V.S., and Sedykh, O.A. (Moscow)

TITLE: Analysis of operation and design of a shorted winding magnetic time-delay circuit

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 1, 1962, 64-76

TEXT: The authors attempted to analyze the operation of a shorted winding magnetic time-delay circuit on the basis of voltage pulse integration properties of a magnetic core. The time-delay circuit consists of two cores. The cores are magnetized by the supply voltage pulses $u_{\sim}$, applied in turn to the working windings w_p of each core. Each magnetizing voltage pulse is $n_{\sim}$ times less than the voltage u_s required for full reversal of the core magnetic field polarity. The demagnetizing pulse is a pulse induced in a given core by the shorted winding from the other core circuit. The bias ΔH is determined by the field intensity produced by the difference in the ampere turns of the control H_y and bias winding H_b. The pulses of output voltage are obtained owing to the feedback winding w_{fb}. The

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S/103/62/023/001/007/014
D201/D304

Analysis of operation and design...

delay time is determined by the number of periods required for the magnetic field polarity reversal and their repetition period t = n/ /f, which actually is that of the supply frequency. The results of the design of the delay circuit, neglecting the effect of bias and control windings, show the following: The delay time is inversely proportional to the resistance of the shorted winding; it increases with increasing $n_{\sim}$, so does the stability with respect to the supply voltage fluctuations. If the effect of the control and bias winding is taken into effect, the time delay of a practical circuit is somewhat larger than that of theoretical, due to the non-ideal shape of the rectangular hysteresis loop. In practice the design requires identical cores and several assumptions, simplifying the tie-up between the input and output parameters of the circuit. As an example the design and design procedure is given for a time delay circuit, operating at f = 400 c/s and having the following parameters: Delay t = 9 sec., half-period load power 135 mW, load R_L = 360 ohms $U_{\sim}$ = 11 V(r.m.s.). There are 8 figures, 1 table and 4 Soviet-bloc references.

SUBMITTED: March 1, 1961
Card 2/2

MATOS, G.

Yugoslavia/General Division. Problems of Teaching A-7

Abs Jour : Ref Zhur-Biologiya, No 3, 1958, 9370

Author : G. Matos

Inst :

Title : Philately and the Teaching of Biology

Orig Pub : Glasnik biol. sek. Hrvatsko prirodsl. drustvo, 1953 (1955). Ser. 2B, 7, 247-248

Abstract : No abstract

Card 1/1

MATOS, Lajos, dr.; PONTYOS, Odon, dr.; FILEP, Gyula, dr.

Prevention of vomiting after anesthesia with Dimenhydrinate (Deadalon). Magy. sebeszet 14 no.6:394-398 D '61.

1. A Csornai Jarasi Tanacs Korhasa (Igazgato: Sik Laszlo dr.) Sebeszeti Osztalyanak (Foorvos: Pontyos Odon dr.) kozlemenye.

(VOMITING ther) (DIMENHYDRINATE ther)
(ANESTHESIA compl)

MATOS, Lajos, dr.; TOTH, Bala, dr.; KISS, Istvan, dr.; ACS, Miklos, dr.

Significance and correlation of diphenylamine reaction, follicular hormone activity and hyperostosis in endometrial hyperplasia. Magy. noorv. lap. 25 no.6:378-383 N '62.

1. A Csornai Jarasi Tanacs Korhaza Sebeszeti Osztalyanak es a Fovarosi Tetenyi-uti korhaz szuleszeti-nogyogyaszati osztalyanak es korszovettani laboratoriumanak kozlemenye.

(ENDOMETRIAL HYPERPLASIA) (FSH) (BONE DISEASES)
(ANILINE COMPOUNDS)

BALINT, Gyorgy, dr.; MATOS, Laszlo, dr.

Congenital aplasia of the gallbladder simulating obstructive cystic calculus. Orv.hetil. 102 no.8:362-363 19 F'61.

1. Peterfy Sandor utcai Korhaz-Rendelointezet, Baleset- Sebeszeti Osztaly.
(GALLBLADDER abnorm)
(CHOLELITHIASIS diag)

MATOS,P., ing.

Influence of freely falling body acceleration on some measurements. Metrologia apl 11 no.3:106-110 Mr'64.

MATOS, P., ing.

Means of measurement of motor vehicles. Metrologia apl 11 no.12:548-553 D '64.

MATOSH, Ya. Yu.

21895. MATOSH, Ya. Yu.
Organizatsiya truda v vinogradarstve. Vinodeliye i vinogradastvo Moldavii, 1949, No 3, s. 46-48

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

MATOSHCHUK, V.

Strict control and timely help. Prof.-tekh. obr. 18 no.1:28-29 Ja '61. (MIRA 14:2)

(Evening and continuation schools)

MATOSHIN, V.M.

MATOSHIN, V.M.; KIREYEVA, V.M.

Role of medical and sanitation detachments in the control of morbidity in miners. Sov.zdrav. 16 no.7:15-19 Jl '57. (MIRA 10:11)

1. Iz mediko-sanitarnoy chasti shakhty "Mushketovskaya-Vertikal'naya" tresta "Budennovugol'" (glavnyy vrach N.I.Behseyeva)
(MINING,
morbidity control in miners (Rus))

KAVAKATIKYAN, A.O. , MATOSHIN, V.M. (Stalino)

Meeting on industrial hygiene and physiology in the coal and other industries. Gig. truda i prof. zab. 2 no.6:69-70 N-D '58
(MIRA 11:12)

1. Donetskiy institut fiziologii truda.
(LUNGS--DUST DISEASES)

MATOSHIN, V.M. (Stalino)

Effectiveness of prophylactic ultraviolet irradiation in the phototherapy room of a coal mine. Vrach.delo no.9:953-955 S'58 (MIRA 11:10)

1. Donetskiy institut fiziologii truda (rukovoditel' raboty - dots. S.A. Brandis).
(ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT)
(COAL MINERS--DISEASES AND HYGIENE)

MATOSHIN, V.M.

Role of the nurse in organizing and conducting prophylactic ultraviolet irradiation in the phototherapy room. Med. sestra 17 no.9:22-28 S'58 (MIRA 11:10)

1. Iz Donetskogo instituta fiziologii truda, Stalino.
(ULTRAVIOLET RAYS--THERAPEUTIC USE)

MATOSHIN, V.M.

Changes in the auditory sensitivity of miners after underground work. [with summary in English]. Vest.oto-rin. 21 no.1:62-65 Ja-F '58 (MIRA 12:1)

1. Iz laboratorii fiziologii truda (zav. - kand.med.nauk F.T. Agarkov) Donetskogo instituta fiziologii truda, Stalino.

(HEARING,
sensitivity changes in miners after underground work (Rus))

(MINING,
auditory sensitivity changes in miners after underground work (Rus))

MATOSHIN, V.M.

Scientific bases for preventive treatment in ultraviolet-ray clinics. Ugol' Ukr. Vol.3 no.5:24-25 My '59.(MIRA 12:9)

1. Donetskiy institut fiziologii truda.
(Coal miners--Diseases and hygiene)
(Ultraviolet rays--Therapeutic use)

MATOSHIN, V.M.

Ultraviolet clinics in Donets coal mines. Svetotekhnika 5 no.8:21-24 Ag '59. (MIRA 13:2)

1.Donetskiy institut fiziologii truda.
(DONETS BASIN--COAL MINERS--DISEASES AND HYGIENE)

MATOSHIN, V.M. (Stalino)

Raising the bodily resistance of underground workers by means of ultraviolet irradiation. Vrach.delo no.11:1189-1191 N '59.
(MIRA 13:4)

1. Laboratoriya fiziologii truda (zaveduyushchiy - kand.med.nauk F.T. Agarkov) Donteskogo instituta fiziologii truda.
(ULTRAVIOLET RAYS--THERAPEUTIC USE)

EXCERPTA MEDICA Sec 17 Vol 5/12 Public Health Dec 59

(XVII, 19*)

3847. CHANGES OF AUDITORY SENSITIVITY IN MINERS AFTER WORK IN UNDERGROUND CONDITIONS (Russian text) - Matoshin V.M. Stalino, USSR. - VESTN. OTO-RINO-LARING 1958, 21/1 (62-65) Tables 1

An investigation of the auditory sensitivity in 60 normal healthy workers in one of the shafts of the Donbass by methods of audiometry was effected prior to the commencement of the work and again on the same day immediately upon its termination. As a result of the investigation it was established that under the influence of the work performed in conditions of a modern mechanized coal shaft, the auditory acuity in underground workers becomes somewhat reduced. This is manifested in a lowering of the upper limit of the audible frequency range and a lowering of acuity of hearing perception of a tone of 2000 c.p.s. frequency, this being most strongly pronounced in underground workers engaged in night shifts. This impairment of the auditory sensitivity is of a purely temporary character. When the investigation was extended to the next day it was found that the indices under examination had returned to normal.

MATOSHIN, V.N. (Stalino)

Methodology and technic of prophylactic ultraviolet irradiation for workers. Fel'd. i akush. 24 no.11:26-31 N '59. (MIRA 13:2)
(ULTRAVIOLET RAYS--THERAPEUTIC USE)

ZHIDIK, A.V.; MATOSHIN, V.M.; OVETSKAYA, N.M.; ONOPKO, B.N.; STARUSHCHENKO, A.S.; SHAPTALA, A.A.; MEL'NIKOV, Ye.B., red.; KUZ'MINA, N.S., tekhn.red.

[Physician's advice to miners] Sovety vracha shakhteram. Moskva, Gos.izd-vo med.lit-ry, 1960. 28 p. (MIRA 13:11)
(MINERS--DISEASES AND HYGIENE)

SERBULENKO, M.G.; MATOSHIN, V.M.

Spectrum analyzer with an electronic function converter. Prib. i tekh. eksp. no.3:84-86 My-Je '60. (MIRA 14:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
(Electronic differential analyzers)

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S/139/60/000/004/009/033
E201/E591

AUTHORS: Grika, V.M., Gutin, S.S., Matoshin, V.M. and Serbulenko, M.G.

TITLE: The Problem of Electrical Forming of Germanium Point-Contact Diodes 25

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp.98-106

TEXT: Mass-produced germanium point-contact diodes of D-2 type are formed by single 50 c/s pulses of 0.05 sec duration and ~ 1.5 A amplitude (35-70 V). Such forming produces diodes whose properties differ from sample to sample, because the result of forming is governed by the initial properties of the devices. To investigate the problem the following procedures were followed. Instead of a single pulse the authors used either a series of short (millisecond) pulses of the same amplitude, or a series of short pulses with the amplitude increasing step-wise at each pulse. After each pulse various parameters of the diodes were measured in order to find out how the rectifying contact was affected by forming. The measured parameters included: (1) capacitance of the contact in the blocking (reverse) direction, (2) forward

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The Problem of Electrical Forming of Germanium Point-Contact Diodes

current ($J_{\text{пр}}$), (3) reverse voltage ($U_{\text{обр}}$), (4) slope of the current-voltage characteristic at near-zero currents, (5) photo-e.m.f. The circuitry of the apparatus is given in Figs.1-3 and some of the results in Figs. 4-5. The latter two figures give the dependences of the reverse voltage, forward current and diode capacitance (C) on the number of forming pulses. The results obtained by the authors showed that it was necessary to produce a molten crystal region at the metal-crystal boundary, without melting the metal point. The authors recommend forming by a series of short pulses whose current amplitudes rise step-wise. After each pulse both $U_{\text{обр}}$ and $J_{\text{пр}}$ should be measured. When the desired values of these two quantities are reached, forming should be stopped. 86% of the samples had the required parameters when this pulse sequence method was used. The authors developed automatic apparatus for pulse-sequence forming of point-contact germanium diodes. This was tried out under industrial conditions and was found satisfactory. There are 5 figures and 9 references:

Card 2/3

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E201/E591

The Problem of Electrical Forming of Germanium Point-Contact Diodes

6 Soviet and 3 English.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut
(Novosibirsk Electro-Technical Institute)

SUBMITTED: September 23, 1959

Card 3/3

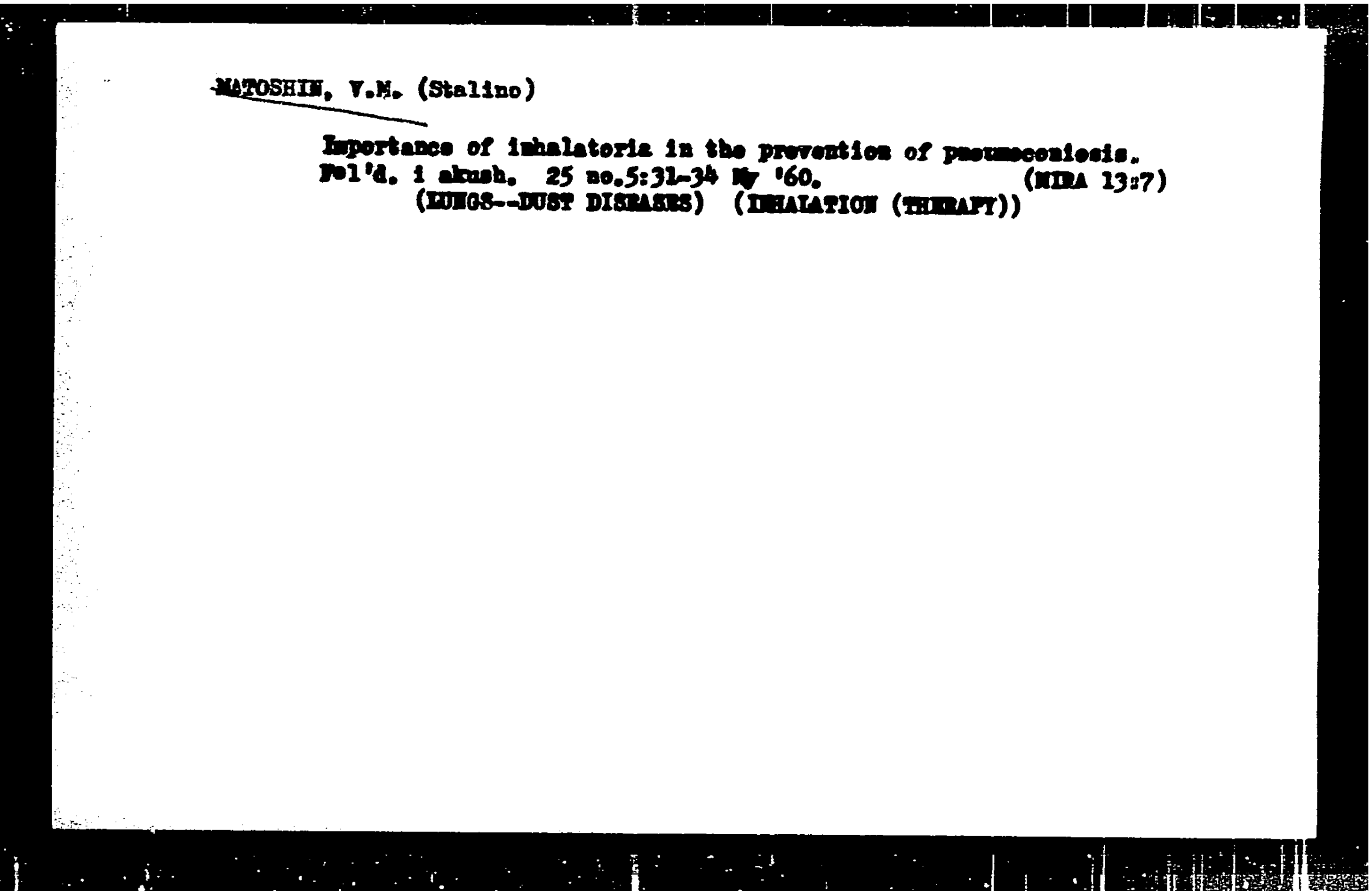
MATOSHIN, V.M. (Stalino)

Reduction of the incidence of disease among workers by means of ultraviolet rays. Sov.zdrav. 19 no.7:60-62 '60.
(MIRA 13:8)

1. Iz Donetskogo instituta fiziologii truda (dir. - kand. meditsinskikh nauk L.E. Zhislin).
(ULTRAVIOLET RAYS—THERAPEUTIC USE)
(DONETS BASIN—COAL MINERS—DISEASES AND HYGIENE)

MATOSHIN, V.M.

Features of experimental silicosis in altered body resistance.
Arkh. pat. 22 no. 8:45-49 '60. (MIRA 14:1)
(LUNGS--DUST DISEASES) (ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT)



MATOSHIN, V.M. (Stalino)

Importance of inhalatoria in the prevention of pneumoconiosis.
Fel'd. i akush. 25 no.5:31-34 My '60. (MIRA 13:7)
(LUNGS--DUST DISEASES) (INHALATION (THERAPY))

MATOSHIN, V.M.

Report of a conference on the problem of adaptation, training, and other methods of increasing the resistance of the body. Pat.fiziol. i eksp. terap. 5 no.4:86-87 Jl-Ag '61. (MIRA 14:9)
(ADAPTATION (BIOLOGY))

MATOSHIN, V.M.

Rural hospital nurse's role in exercise therapy. Med. sestra 20 no.7:
27-30 Jl '61. (MIRA 14:10)

1. Iz Ternopol'skogo meditsinskogo instituta.
(EXERCISE THERAPY)

MATOSHIN, V.M. (Ternopol')

Organization of work in medical exercise therapy in a rural district hospital. Sov. zdrav. 21 no.5:49-53 '62. (MIRA 15:5)

1. Iz Ternopol'skogo gosudarstvennogo instituta (dir. - dotsent P.Ye. Ogiy).
(EXERCISE THERAPY) (HOSPITAL CARE)

MATOSHIN, V.M. (Ternopol')

Teaching exercise therapy and medical supervision in a therapeutic department. Sov.zdrav. 21 no.8:62 '62. (MIRA 15:11)
(EXERCISE THERAPY--STUDY AND TEACHING)

MATOSHINA, D.G.; MATOSHIN, V.M. (Ternopol')

Problems in the therapeutic and prophylactic use of physical excercises in diseases of the organs of circulation and respiration at the All-Union Conference on Medical Control and Exercise Therapy. Vop.kur., fizioter.i lech.fiz.kul't. 27 no.3:282-285 My-Je '62. (MIRA 15:9)

(EXERCISE THERAPY—CONGRESSES) (RESPIRATORY ORGANS—DISEASES)
(BLOOD—CIRCULATION, DISORDERS OF)

MATOSHIN, V.M. (Ternopol')

Make wider use of the methods of exercise therapy in preparing pregnant women for labor. Fel'd. i akush. 27 no.4:25-29 Ap '62.
(MIRA 15:6)

(EXERCISE THERAPY)
(OBSTETRICS)

MATOSHIN, V. M. (Ternopol')

Methodic instructions in conducting medical gymnastic exercises
for pregnant women with vitium cordis. Fel'd. i akush. 27 no.6:
27-32 Je '62. (MIRA 15:7)

(EXERCISE THERAPY) (PREGNANCY)
(HEART—DISEASES)

MATOSHIN, V.M. (Ternopol')

"Our child" by M. Klimova-Fugnerova. Reviewed by V.M. Matoshin.
Med.sestra 22 no.2:59-60 F '63. (MIRA 16:5)
(CHILDREN—CARE AND HYGIENE) (KLIMOVA-FUGNEROVA, M.)